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ABSTRACT

This companion document designed to provide employers with basic information, understanding, and facts regarding the employment capabilities of handicapped persons; five other companion documents; and an inservice guide comprise a series developed for assisting disabled persons in their transition from school to work. An introduction presents information regarding common misconceptions held by society relative to employment of the handicapped, legislation affecting the employment of handicapped individuals, and hiring of handicapped workers. The next section provides an overview of these handicapping conditions: blindness/visual impairment, deafness/hearing impairment, orthopedic impairment (multiple sclerosis, cerebral palsy), mental retardation, learning disabilities, and other health impairments (epilepsy, mental illness). Three other brief sections address supervising handicapped employees, architectural needs/criteria, and work station adaptation. A bibliography concludes the document. (YLB)

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Research and Development Series No. 257E

# EXTENDING HORIZONS: EMPLOYERS AS PARTNERS

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Catherine West

*A document in the series*

**EXTENDING HORIZONS:**

**A RESOURCE FOR ASSISTING HANDICAPPED YOUTH IN THEIR TRANSITION FROM VOCATIONAL EDUCATION TO EMPLOYMENT**

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**Extending Horizons: Employers as Partners** is designed to provide employers with basic information, understandings, and facts regarding the employment capabilities of handicapped persons. It is intended that this document will dispel many of the myths related to employment of handicapped persons. Descriptions of general characteristics of handicapping conditions furnish a general knowledge base for identifying approaches to material adaptations and equipment modifications necessary for some handicapped individuals to perform on the job. Federal regulations applying to employers and relative to employment of handicapped persons are also addressed in this booklet.

## INTRODUCTION

The need for information regarding the employment of handicapped individuals has become increasingly important in recent years for a number of reasons. There now is ongoing emphasis in the legislation to ensure that handicapped persons have the opportunity for education and employment. At the same time, members of society, especially educators and employers, have had limited experience in implementing federal regulations with this degree of specificity. Before the enactment of recent laws, the society had traditionally isolated handicapped persons; consequently, many persons have never worked with those having handicaps.

This publication provides basic information that many employers need to know as they anticipate working with or employing handicapped individuals. You, as an employer, will wish to read this document and use it for future reference. The information it contains may also be used as a resource in planning conferences or workshops for employees at administrative, managerial, and supervisory levels.

In order to provide knowledge and understanding pertinent to the employment of handicapped workers, the authors present information regarding the following matters:

- General descriptions of handicapping conditions
- Common misconceptions held by society relative to employment of the handicapped
- Legislation affecting the employment of handicapped individuals
- Types of supportive services to assist handicapped workers in performing on the job successfully
- Problems concerned with assessing employment sites and adapting facilities and equipment

## Who Are the Handicapped?

In 1970 over 11,000,000 Americans of working age, 9 percent of the total population in this age group, had permanent work disabilities. In the 13 years since, this figure has risen to over 10 percent, in excess of 12,200,000 people. In comparison with the general population, these disabled workers are older, have lower educational levels, are more likely to be minority group members and heads of households, have far higher rates of unemployment and underemployment, and hold proportionately fewer professional, technical, and managerial jobs. Their disabilities include muscular and skeletal conditions, respiratory and related disorders, epilepsy, multiple sclerosis, paralysis, visual impairments, deafness, and mental illness and retardation (*Facts about Handicapped People* n.d.).

According to Section 503 of the Federal Vocational Rehabilitation Act of 1973, a handicapped person is anyone who

1. has a physical or mental impairment that substantially limits one or more of his or her major life activities;

2. has a record of such an impairment; and/or

3. is regarded as having such an impairment.

The phrase "substantially limits" has to do with the degree to which the disabiity affects employability. "Major life activities" include communication, ambulation, self-care, socialization, education, vocational training, transportation, housing, and employment. The major emphasis of Section 503 is on those life activities that affect employment.

Who are these 12,000,000-plus handicapped American workers? Dr. Joseph J. Panzarella, Jr., is director of a hospital, heads the rehabilitation department of another hospital, serves on the faculty of two community colleges, and is a professor at New York University's Post-Graduate Medical School. He also has multiple sclerosis and is unable to move anything but his head. Kay Beaty is deaf and blind and manages the food-vending stand for workers at the Levi Strauss plant in Corpus Christi, Texas. Steven Salmans, who has cerebral palsy and is confined to a wheelchair, does outdoor landscape work and moonlights as a door-to-door salesman (Koestler 1978, pp. 1-3).

Many such examples of handicapped workers who successfully carry out jobs despite their disabilities can be cited. Unfortunately, many examples can also be cited of potentially productive handicapped persons who cannot find employment, not because they are unskilled or unqualified, but simply because many employers are reluctant to hire handicapped workers.

## Myths versus Facts

Major concerns expressed by employers in regard to hiring handicapped persons are the following:

- Employee-related expenses will rise.

- Safety records will be jeopardized.

- Absenteeism will be high, and job performance will not be up to standard.
- Other employees will not accept handicapped workers.

These statements reflect myths all too commonly accepted by employers. The facts show them to be just that—myths.

**Fact #1: Employee-Related Costs Will not Rise**

Many employers believe that hiring handicapped workers will cause their industrial insurance and worker compensation rates to rise. In reality, such rates are generally based on the type of business and the company's past accident records, not on the physical condition of employees. So a handicapped employee will cause insurance rates to go up only if the employee has more accidents than the company's nonhandicapped workers.

It is also a common misconception among employers that it will be unreasonably expensive to accommodate the handicapped worker by modifying the work site or purchasing special equipment. Research has shown, however, that only minimal adjustments are required for most disabled workers and that such adjustments can be made relatively inexpensively in most cases. Frequently, based upon the economic need of the individual, state departments of rehabilitation will help defray all or part of the cost of special equipment for handicapped workers for use on the job.

The Du Pont study (see table 1) found that minimum modifications necessary to accommodate handicapped employers could be made for less than one cent a square foot.

Sears, Roebuck & Company, in the process of carrying out a survey of handicapped employees of Sears, found the following examples of accommodation expenses:

- Six cassette tape recorders for six blind maintenance agreement telephone salespeople, $300
- Lowering desk, widening door, installing grab bars in lavatories for two dozen service technicians in wheelchairs, $300 to $600 (estimates)
- Rental of IBM typewriter with shield for clerk with cerebral palsy, standard rental charge
- Telephones with amplifiers for hearing-impaired employees, $18 per installation plus 65 cents per month for rental
- Optacon for blind rehabilitation specialist, including training in its use, $3,800

**Fact #2: Safety Records Will not Be Jeopardized**

Some employers feel that handicapped employees will tend to be more accident-prone than nonhandicapped employees. This ties in directly to the fear of rising insurance costs, since poor safety records would cause insurance rates to rise. Once again, however, the facts disprove the myth. An overwhelming majority of handicapped workers rate average or better in job safety when compared to their nonhandicapped co-workers.

## TABLE 1

## HOW HANDICAPPED WORKERS DO ON THE JOB

| Source | Job Performance | Attendance | Safety | Insurance Costs |
|---|---|---|---|---|
| **Bendix Corporation**<br><br>Report on 4,500 handicapped workers | Good | Good | Good to excellent | No special insurance problems |
| **Bureau of Labor Statistics**<br><br>A survey comparing 11,000 handicapped workers with 18,000 nonhandicapped workers | Slightly better than nonhandicapped | Fair<br><br>Days absent rate—slightly higher for handicapped | Better<br><br>Major injury rate significantly lower for handicapped | Fear of higher costs largely unfounded |
| **E. I. Du Pont de Nemours & Co.**<br><br>A study of 1,000 handicapped workers | Average or better (81% of handicapped rated average or better) | Average or better (86% of handicapped rated average or better) | Better<br>98% of handicapped rated average or better | No increase in compensation costs<br>No accidents reported |
| **National Industrial Conference Board**<br><br>A survey of 242 firms | Good | Good | Good | No increase in compensation costs |
| **A pilot study of employment practices**<br><br>A survey of 111 very large companies | Good<br><br>93.5% of handicapped rated average or better | Good<br><br>91.5% of handicapped rated average or better | Average or better<br><br>Accidents: 90.4% of handicapped rated average or better<br>Lost time: 86.2% rated average or better | |
| **U.S. Chamber of Commerce**<br><br>National Association of Manufacturers<br>A study of 279 firms | Good | Better than non-handicapped | Better work habits than non-handicapped | Just under 90% of employers reported no effect on costs |

SOURCE: President's Committee on Employment of the Handicapped

**Fact #3: Absenteeism Will not Be High, and Job Performance Will Be up to Standard**

Survey results from a number of studies show this to be true. As in the case of job safety, the attendance and performance records of the vast majority of handicapped workers are equal to or better than those of their nonhandicapped counterparts.

**Fact #4: Other Employees Will Accept Handicapped Workers**

This concern relates to the attitudes of nonhandicapped workers toward handicapped employees and may reflect the attitudes of the employers themselves. Very often a corollary concern is that handicapped workers will be a burden on the nondisabled. While these concerns are more subjective in nature than those discussed above, they are still largely groundless according to the results of six separate studies reviewed in table 1.

Once the handicapped employee has been familiarized with the work area and job duties, there is usually no major inconvenience for co-workers. The special accommodations that may have to be made for handicapped workers—such as reserving parking spaces near building entrances for handicapped use—have not been found to create friction with other employees.

It is clear, then, that the causes of employers' reluctance to hire handicapped workers are frequently rooted in misconceptions and negative attitudes. The misconceptions can be corrected through an examination of the facts presented above. Information (summarized in table 1) supplied by corporations and government agencies to a congressional committee documents the fact that many beliefs about handicapped workers are not based on fact. Based upon this actual experience with handicapped workers, legislation has been passed to protect the civil rights of these individuals in employment situations.

## Legislation

Section 503 of the Rehabilitation Act of 1973 requires "affirmative action" on the part of employers in their treatment of handicapped applicants and employees. Under this section, any employer doing business with the government under a contract for more than $2,500 must take affirmative action to hire handicapped workers. This requirement also applies to job assignments, promotions, training, transfers, accessibility, working conditions, and termination. The emphasis of the legislation and of the guidelines for its implementation (issued in 1976) is on qualified handicapped people. Employers are not required to hire unqualified handicapped applicants, but simply to give equal consideration and ensure nondiscrimination to these applicants. In order to be eligible for the protection of these regulations, a person must be capable of doing a job with reasonable accommodation.

No specific numerical goals or timetables for the hiring of handicapped workers are required by this legislation. Employers are simply required to make a good-faith effort to comply. A written affirmative action plan regarding handicapped workers is required of contractors with contracts of $50,000 or more and of those having at least 50 employees. These plans may be separate from or integrated with other affirmative action plans affecting minorities and women. The plan must be submitted to and approved by the U.S. Department of Labor and disseminated to all employees. Employers must also notify union representatives of these affirmative action requirements and must review in-house policies and procedures to ensure that they do not discriminate against handicapped applicants and employees. Contractors found to be in violation of approved affirmative action plans may have their contracts suspended or cancelled.

Section 503 also provides a complaint procedure for handicapped people who feel they have been discriminated against by employers. Federal grants and federally assisted contracts are not included in Section 503 but are covered by a separate section, Section 504, of the same act. Most states have enacted laws prohibiting employer discrimination based on handicap. In Ohio, for example, Senate Bill 162, enacted in 1976, makes it unlawful for employers with four or more employees to discriminate against persons on the basis of handicap. The guidelines for the implementation of this law closely parallel federal regulations for Section 503.

The Architectural Barriers Act of 1968 requires that federally financed public buildings be designed and constructed to provide accessibility to the physically handicapped. These requirements also apply to federally assisted rehabilitation and repair of existing structures.

The Tax Reduction and Simplification Act of 1977 provides tax incentives for employers who hire handicapped workers, allowing tax credits of up to $100,000 per year on wages paid to disabled employees. The 1976 Tax Reform Act allows deduction of up to $25,000 for architectural alterations made to provide accessibility for disabled workers.

It is of maximum importance that employers view this legislation in a positive light rather than as a further example of bureaucratic interference in their operations. The spirit and requirements of the legislation are focused on protecting the rights of qualified, job-ready handicapped persons. These laws are not intended to force employers to hire unqualified handicapped workers, nor do they require a great amount of record keeping and red tape.

### Hiring Handicapped Workers

Traditional methods of employee recruitment are not effective in locating qualified handicapped workers. Employers, therefore, should employ recruitment strategies specifically designed to reach this target population. Disabled people can be informed of an employer's willingness to hire the handicapped by statements in classified advertising and recruitment materials and by disabled persons featured in advertising and public relations programs.

Numerous agencies and groups serve as sources for recruitment of qualified handicapped employees. Such sources include vocational rehabilitation agencies, Social Security and Veterans Administration offices, community mental health agencies, sheltered workshops, school systems, hospitals, and all public and private agencies that deal with specific disabilities. In addition to serving as excellent referral sources, most of these organizations provide supportive services to ensure the success of the handicapped worker in the new job.

Having identified these resources for recruitment, the employer should encourage agency representatives to visit his or her facilities and familiarize themselves with the operations. On-site observation and review will decrease the likelihood of inappropriate referrals and encourage the development of a strong working relationship.

Employers must also ensure that their internal policies and procedures for screening and selecting applicants do not discriminate against handicapped persons. Job descriptions and qualification requirements should be reviewed to identify and eliminate requirements that are not job related. Particular attention in this regard should be given to preemployment physicals. In its policy statement regarding handicapped workers, the AFL-CIO states that "the use of preemployment physical examinations for any other purpose than to determine physical or mental ability for a suitable job is unsound" (*Working Together*, 1973). Employees with responsibility for interviewing

and hiring should be trained in effective methods of interviewing disabled applicants. These methods include the basic strategies of focusing on the applicant's abilities rather than his or her disability, avoiding giving special consideration simply because of the disability, and eliciting information from the applicant about what he or she can do.

On-the-job training (OJT) programs are an excellent source for locating qualified disabled workers. These programs incorporate the provision of supportive services by appropriate agencies and hands-on training by the employer, with the costs shared between the employer and the service agency. The employer may be required to hire the trainee at the end of the training period, depending on the terms of the individual OJT contract. All OJT contracts provide for termination of the employee for valid, documented reasons. Information about the availability of OJT programs can be obtained from state rehabilitation services agencies and governors' committees on employment of the handicapped.

Similar to OJT programs, the Projects With Industry (PWI) program was started in 1968 and incorporated as Section 622 of the Rehabilitation Act of 1973. The program is administered nationally and affords corporations, labor unions, and community-based organizations the opportunity to participate in planning and operating training and work-related programs for handicapped people. The goal of the program is to provide realistic training designed to meet industry standards and to accommodate the needs of the handicapped trainees. In many cases, the trainees are hired by the corporations upon completion of training. An obvious advantage of this arrangement is that any necessary job or work-site modifications can be made during the training phase.

When a handicapped person is hired, as when any applicant is hired, it is essential that proper orientation and training be provided. The nature of this orientation and training will depend on the particular capabilities involved and the employee's familiarity with and proficiency in the skills required by the position.

The types of special orientation required for persons with specific disabilities are largely a matter of common sense. A blind employee, for example, should be oriented to the job site so that he or she can independently locate specific building areas such as the restroom, the personnel office, and the cafeteria. In orienting a mentally retarded employee, special care must be taken to give explicit instructions and to solicit feedback to ensure understanding. The degree of actual skill training involved depends on the new employee's level of experience and has little to do with the disability.

An important aspect of orientation is the introduction of the new employee to co-workers. Those employees who work closely with the new employee should be informed only of the actual disability or disabilities and the extent to which it limits employee activities. Emphasis should be placed on the new worker's abilities. Too often, well-meaning persons treat disabled people in ways that assume limitations greater than those actually imposed by the disability. Hearing-impaired persons, for example, are often thought to be mentally deficient if their speech is halting or difficult to understand. In reality, the difficulty may be with pronunciation because they cannot hear themselves speak. In other cases, misconceptions about the nature of a particular condition may cause co-workers to be leery of disabled employees. This is often the case with epileptic workers. Many people still believe, mistakenly, that epilepsy is a form of mental illness and they fear that an epileptic worker will be subject to sudden, severe seizures. The employer can avoid many misunderstandings by taking steps to educate nonhandicapped employees about the nature and extent of the disabled employee's handicap, as well as the various controls and support that may provide varied levels of independence. The following information will be useful to the employer in orienting and sensitizing employees to the realities of various disabling conditions.

## OVERVIEW OF HANDICAPPING CONDITIONS

### Blindness/Visual Impairment

In orienting a visually impaired worker, the employer should remember that the handicapped person is the best available source of information on what he or she needs to know about the work environment. The employee will already have developed techniques for becoming familiar with the surroundings. Let the worker tell you what information is needed and how detailed it should be. Both words and touch will have to compensate for what a sighted employee can learn visually, so it is important that directions be as clear and explicit as possible.

The employer and those nonimpaired employees who will work with the blind employee should keep in mind that the blind worker neither wants nor needs sympathy. Certain kinds of assistance will, however, be needed, which can be provided by co-workers and/or the employer. The blind employee will need time to learn to identify individual voices of co-workers, so it is important that they be introduced and that they identify themselves when addressing the blind worker during the initial period of employment.

Until oriented to the new surroundings, the new employee may occasionally need to be guided by a sighted co-worker. One must take care never to push or pull a blind person. Let the blind individual take your arm, and walk a half-step ahead of him or her. He/she will follow the motion of your body.

Always speak directly to the blind employee. If the employee is with someone else, do not use the third person as an interpreter. It is not necessary to shout unless you know that the person also has a hearing impairment. There are no reasonable substitutes for such words as *look* and *see*, and these words are not offensive to blind people. Use them as you would with anyone else.

If the visually impaired worker has a guide dog, remember that the dog is responsible for its master's safety. Do not pet the dog or otherwise distract it.

### Deafness/Hearing Impairment

In many cases, new employees learn on the job, basic company policies regarding work hours, coffee and lunch breaks, sick leave and vacation policies, employee benefits, and similar matters. Since the hearing-impaired worker may experience difficulty in picking these things up from co-workers through conversation, the employer should ensure that such information is provided as a part of orientation.

When introducing the new deaf worker to other employees, the employer should do so individually in order to allow the hearing-impaired worker to catch names and other information more easily. The ability of the deaf person to communicate will be enhanced if the other person faces him or her and speaks in normal tones. Shouting will usually not help, but touch and facial expression can help to convey meaning. While many hearing-impaired persons can read lips to some degree, it is impossible to speechread 100 percent of any conversation. Many hearing-impaired persons use sign language—a series of hand and arm movements that represent concepts—and finger-spelling in which different finger positions represent each letter. Signing is easy to learn, and many nonhandicapped people use it to communicate effectively with deaf relatives and friends.

The deaf person's speech may sound "different" because of abnormalities in rhythm, intonation, and pronunciation. This is not a sign of intellectual deficiency, but simply a result of the deaf person's not being able to hear.

If regular staff meetings are a part of the deaf employee's job, it will be necessary to provide for the person's participation. If the employee uses sign language, an interpreter who can communicate in sign language should be present, if possible. If this is not feasible, a staff member sitting next to the disabled employee can take notes, which the deaf worker can glance at periodically. Keep in mind that, whether an interpreter or note taker is used, the deaf worker will always be a few words or sentences behind. When soliciting comments or questions, pause long enough to allow him or her to catch up so he or she can participate.

The deaf employee may occasionally need to make personal phone calls. It is a good idea to suggest a hearing employee who can make such calls for the deaf person. If the hearing-impaired worker needs to use the telephone extensively in his or her work, there are machines available to facilitate use of the phone. Ask the employee about TTYs or MCMs, or write for information to the National Association of the Deaf, 814 Thayer Avenue, Silver Springs, Maryland 20910.

## Orthopedic Impairment

Orthopedically disabled persons are those with physical problems severe enough to limit or alter performance at work. The origins of such conditions may be congenital, disease related, or accident related. Most problems encountered in the work environment are those of access and mobility. Employer resourcefulness, application of mechanics, and common sense usually lead to accommodating the condition. Accommodation may not always be possible but should at least be seriously considered.

Two commonly encountered causes of orthopedic disability are mutliple sclerosis and cerebral palsy. A brief description of each follows.

### Multiple Sclerosis

Multiple sclerosis is a neurological disease the cause of which is not known. The myelin sheath is the insulation around nerve fibers in the brain and spinal cord that carry messages to all parts of the body. Multiple sclerosis attacks and destroys myelin, replacing it with hardened tissue. This process is called sclerosis. It occurs at various places in the nervous system (thus the term *multiple* sclerosis), causing minor interruptions of nerve impulses. The symptoms may be mild or severe, they come and go, and they occur in scattered parts of the body. Characteristics may include partial or complete paralysis, numbness or tingling, blurred vision, slurred speech, loss of coordination, and fatigue. Because of the coordination and speech problems that sometimes occur, people with multiple sclerosis are often mistakenly accused of being drunk, so it is particularly important for the employer to ensure that co-workers understand the disease in order to avoid such mistaken impressions.

The type of orientation required for the worker with multiple sclerosis will depend on the form the disease takes with the individual worker. Generally, there should be little difference from the orientation regularly provided to new employees, except that multiple sclerosis workers with ambulatory problems will need to be oriented in terms of physical accessibility of the work site. Co-workers should be informed of the nature and extent of the worker's condition and of the fact that multiple sclerosis is *not* a communicable disease.

**Cerebral Palsy**

Cerebral palsy is not a disease. It is a group of medical conditions caused by damage to the part of the brain that controls and coordinates muscular function, and it is characterized by nerve and muscle dysfunction. There are five basic characteristics of cerebral palsy, each with similar but distinct symptoms:

- Stiff and difficult movement due to loss of voluntary muscle control (50 to 60 percent of cerebral palsy cases have this characteristic)
- Involuntary, uncontrollable movements; slow, jerky, irregular writhing and twisting of limbs (12 to 18 percent of cerebral palsy cases have this)
- Inability or awkwardness in maintaining balance or coordination (1 to 10 percent of cerebral palsy cases have this)
- Resistance to almost all movement
- Rapid, repetitive movements of the body

More than half of those persons having cerebral palsy are mentally retarded; a little less than one-third have seizures; about one-half have visual impairments; and many have hearing, speaking, and learning problems. The physical manifestations of the condition can sometimes be corrected or minimized through orthopedic surgery, braces, and medication.

Because of speech and gait abnormalities, individuals with cerebral palsy, like those with multiple sclerosis, are sometimes mistakenly accused of being intoxicated. In order that co-workers of the cerebral palsy employee do not get incorrect impressions, the employer should take steps to inform them of the nature and severity of the handicapped worker's symptoms. Once again, be sure to inform co-workers that cerebral palsy is not contagious.

Orientation required for the new cerebral palsy employee will depend on the symptoms. In some cases, no special orientation will be needed. In others the employee may require orientation in terms of accessibility of the working environment. Mentally retarded cerebral palsy workers will require the same special orientation necessary for mentally retarded workers not afflicted with cerebral palsy.

**Mental Retardation**

In the case of mentally retarded workers, special orientation is essential. All instructions concerning working hours, relevant policies and procedures of the company, and specific job duties must be clear, precise, and repeated to ensure understanding. The person providing orientation should ask questions of the mentally retarded employee as the orientation progresses to determine whether the worker is learning what is being taught.

In sensitizing co-workers, the employer should inform them of the extent of the retarded worker's abilities and the areas in which he or she may be dependent on co-workers for assistance. It may be advisable to assign a co-worker as a "buddy" to the retarded worker or to set up a rotating schedule of co-workers to serve as buddies. Of course, the best way for the employer to ensure good working relationships among employees is to set the example by his or her own interaction with the disabled employee.

## Learning Disabilities

Learning disabilities are often referred to as the "hidden handicap," since their effects are not readily apparent in the physical appearance or verbal expression of the learning disabled individual. There is no single formula for effectively accommodating the learning disabled worker, because there is no "typical" person with whom to work. The term "learning disability" means many things to many people, and finding an acceptable definition has proven to be a major problem even for specialists in the field. The federal definition does, however, provide a framework within which to examine the problem. That definition (Johnson and Johnson 1978) is as follows:

> Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include individuals who have learning problems which are primarily the result of visual, hearing or motor handicaps, of mental retardation, of emotional disturbance, or of environmental, cultural or economic disadvantage. (p. 5)

In practice, learning disabilities usually manifest themselves in a severe discrepancy between achievement and intellectual ability in such areas as oral and/or written expression, listening comprehension, basic reading skills and/or reading comprehension, and mathematical calculation and/or reasoning.

Given the broad nature of this definition, it is nearly impossible to identify characteristics common to learning disabled students in general. Although the most common characteristic of the learning disabled population is underachievement, not all students who fail to achieve according to their ability can be said to be learning disabled. Most learning disabled students are described as having disorders of attention, usually short attention span and poor concentration. About half of all learning disabled students exhibit hyperactive behavior (Johnson and Johnson 1978, p. 7).

Very little special job orientation should be required for the learning disabled worker. The major areas in which the employer needs to adjust his or her behavior to accommodate the learning disabled worker are those aspects of the job that may be affected by the specific learning disability involved. For example, a worker with reading problems will perform better if instructions are given verbally rather than in writing. If the worker has problems expressing himself or herself in writing and the job requires making progress reports, allowing the individual to make the reports orally to a supervisor can help to overcome the difficulty.

Breaking jobs down into smaller component tasks can be useful in dealing with problems related to attention span and concentration. For learning disabled workers with arithmetic problems whose jobs require arithmetical calculation, allowing the use of calculators on the job should enhance performance.

Because learning disabled persons are more different from one another than they are alike, suggestions for accommodating them on the job must be very general in nature. Individualization on a case-by-case basis, along with structure and consistency, is the key to effective utilization of the learning disabled employee.

## Other Health Impairments

Other health impairments include conditions of limited strength, alertness, or vitality resulting from acute or chronic problems, such as diabetes, heart disease, asthma, sickle cell anemia, leukemia, hemophilia, rheumatic fever, or epilepsy. These conditions are sometimes referred to as "hidden or invisible disabilities."

### Epilepsy

Epilepsy is commonly encountered and has often carried a social stigma. No real differences exist between orientation needs of a new epileptic worker and those of a nonhandicapped employee regarding the physical surroundings of the job site and the basic policies and procedures of the job. The major problem encountered with epileptic workers is misunderstanding and apprehension about the nature of the condition on the part of co-workers and employers. This problem can be avoided if the employer educates himself or herself and other employees about epilepsy.

Epilepsy is not a disease, but rather a symptom of a disorder of the brain. It is not a form of mental illness. There is no single cause of the disorder. Epilepsy can take many forms. Grand mal seizures (convulsions) are usually accompanied by complete blackouts of short duration. Such seizures are rare today because of modern drugs used to control epilepsy. Petit mal seizures are momentary lapses of attention—a sort of "blanking out" for a few seconds. Pyschomotor seizures are of very short duration and are marked by blinking or random, purposeless movement. After a seizure, a short period of rest usually restores the epileptic to normal functioning. Seizures are generally infrequent, and between seizures behaviors of most people with epilepsy are normal. In many cases, the epileptic person feels a warning "aura" prior to the onset of a seizure and can solicit assistance and/or go to a secluded area to rest until the seizure has passed.

Co-workers need to know what to do in case of a seizure on the job. For petit mal and psychomotor seizures, nothing need be done other than to explain what is happening to others who witness it. In the case of a grand mal seizure, co-workers should remain calm and clear the area around the epileptic worker; do not try to restrain his or her movement, do not force anything between his or her teeth, but turn the head to one side and place something under it. After the seizure, allow the person to rest if desired. It is not usually necessary to call a doctor unless the attack is followed by another major seizure or if the seizure lasts more than 10 minutes. The employee has responsiblity to keep an employer informed reagarding medical support required.

### Mental Illness

The mentally restored worker—one with a history of mental illness who has been evaluated and treated and is now job-ready—needs very little, if any, special orientation to the job. The major problem area to be dealt with by the employer is the issue of co-worker attitudes toward the mentally restored employee. In many cases it should not be necessary for co-workers to be told anything about the new worker's history of mental illness, since it is not a visible condition and the person's condition is under control. If it becomes a matter of common knowledge among co-workers, the employer should take steps to ensure that nonhandicapped employees understand that the mentally restored worker has been treated, that the condition is under control, and that there is no need to treat the person differently from other employees. The employer must guard against giving less than a full share of work and responsibility to the restored worker.

School personnel, employers, and the public in general must recognize and understand that all individuals are different whether they are handicapped or nonhandicapped. All have individual capabilities. The challenge to educators and to employers, therefore, is as follows:

- Search for and identify capabilities of disabled individuals
- Provide early career exploration experiences
- Prepare disabled youth with occupational information and skills as well as decision-making skills
- Provide work experience and support services in keeping with individual interests, abilities, and objectives
- Direct individuals to opportunities for employment and for advancement

Job placements can be individualized by matching performance skills with competencies required on the job. Modification of the work environment, job restructuring, support services, flex time, adjusted or controlled work schedules—all are options for consideration in assisting disabled workers to perform successfully in the work world.

## SUPERVISING HANDICAPPED EMPLOYEES

Supervision of a handicapped employee should differ very little from that of nonhandicapped workers. The most important point to remember is that the supervisor should not overprotect or give special preference to the handicapped employee. Except for those special accommodations appropriate to the particular disability involved, the handicapped employee should be treated as other employees in comparable positions. The taxonomy presented in table 2 (Pati 1978, pp. 144-153) indicates supervisory techniques that have proven to be effective with certain types of disabilities.

## TABLE 2

## TAXONOMY OF EFFECTIVE SUPERVISORY TECHNIQUES BY GENERAL DISABILITY

| General Disability | Job Instruction & Communication | Supervisory Style | Motivational Strategy | While Making Reasonable Accommodation |
|---|---|---|---|---|
| A. Deafness | Written messages<br>Signals<br>Body Language<br>Job envelope with job descriptions | Supportive<br>General as opposed to close supervision | Intrinsic and extrinsic<br>Reinforcement on ability and performance | Emphasize business necessity, i.e., had to be done anyway<br>Dependability valued |
| B. Blindness | Verbal messages, voice tone<br>Braille when possible<br>Physical contact (touch) | Supprtive<br>General<br>Nonpatronizing | Intrinsic<br>Reinforcement on feeling of belonging; you are always available to help, but let the person ask for help—don't over-patronize<br>Reinforcement on ability | Same<br>Dependability valued |
| C. Mental Retardation | Verbal and written messages, very specific<br>Identify, teach job elements<br>Demonstrate<br>Repeat | Authoritarian<br>"Close"<br>One job at a time, otherwise gets flustered | Intrinsic and extrnisic<br>Structure—no parent-child relationship<br>Brag about the person<br>If poses problem, don't dock pay, but tell him or her not to come to work the next day<br>Allow to work at own pace | Explanation not necessary |
| D. Paraplegia | Nothing special | Contingent—like anybody else | Intrinsic and extrinsic<br>Recognition of strength<br>Reinforcement on ability and performance | Tie in business necessity<br>Dependability valued |

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## ARCHITECTURAL NEEDS/CRITERIA

Many employers find that their physical facilities present architectural barriers to handicapped persons. In order to ensure nondiscrimination with regard to disabled workers, such barriers must be eliminated. The fear that the elimination of these barriers will be extremely costly is generally unfounded. For example, initial cost estimates for the revamping of the Kaiser Aluminum and Chemical Company's 27-story corporate headquarters in Oakland, California, to improve accessibility to its disabled employees ran into the hundreds of thousands of dollars. In actuality, the job was completed for less than $8,009. Also, as noted in the section on legislation, tax deductions of up to $25,000 per year are permitted for architectural alterations designed to improve accessibility to the handicapped.

Common changes needed to eliminate architectural barriers include the following:

- At least one primary entrance wide enough to allow easy access by a wheelchair
- Audio and visual warning signals in certain hazardous areas to alert the blind and the deaf, respectively
- Ramps at entrances and at least one handrail per ramp
- All doors at least 32 inches wide
- Nonslip surfaces on all floors and ramps
- Water fountains, public telephones, light switches, and elevator controls located at a level low enough for use by those in wheelchairs
- Restrooms with stall doors wide enough to accommodate a wheelchair; raised toilets and handrails to facilitate transfer from wheelchair
- Public walks at least two feet wide with a grade of no more than five degrees
- Reserved parking spaces near building entrances

## WORK STATION ADAPTATION

Depending again on the particular disability involved, modifications to the handicapped employee's work station may be required. This may be as simple as lowering a workbench to accommodate a wheelchair-bound worker, or it may involve the purchase of special equipment, such as the Optacon to enable a blind employee to "read" printed material (Koestler 1978, p. 21). Such modifications can usually be made easily and inexpensively. In some cases, financial assistance is available for the purchase of special equipment.

Vocational rehabilitation agencies are good sources of information and assistance in accomplishing the necessary modifications. The *Rehabilitation Engineering Sourcebook*, available from the Institute on Information Studies, 400 N. Washington Street, Suite 202, Falls Church, Virginia 20046, cites numerous case studies involving various approaches to work site modification and lists additional sources of information and ideas.

## CONCLUSION

More and more handicapped people are becoming gainfully employed as a result of antidiscrimination legislation, affirmative action requirements, and changing attitudes, but much remains to be done. Employers play a very significant role in determining how quickly and effectively the elimination of discrimination against handicapped workers will be accomplished, and employers have a great deal to gain in making sure the task is accomplished. There is a largely untapped pool of talent among America's handicapped workers, and the wise employer will find ways of utilizing it. The bibliography contained in this publication lists a variety of articles and pamphlets available at little or no cost, which can be useful to employers in developing recruitment, hiring, and training programs for handicapped workers.

The performance records of disabled workers show that they constitute a significant asset to their employers in areas of safety, dependability, and production. The employment of handicapped workers also contributes to the improvement of the economy. For every $1,000 that the nation invests in rehabilitation, the economy is returned $9,000. In 1975, 2,000 disabled workers earned $10,000,000 and returned $2,000,000 in federal taxes (Tombari 1979, pp. 44-51). The Rehabilitation Institute of Chicago reported on 176 disabled persons placed in competitive jobs. After placement, not only did they no longer require the $1,056,000 they had been receiving in disability benefits, but they also contributed $1,643,000 in productivity in one year (*Special Report* n.d.).

Projections indicate that without affirmative action to employ the handicapped, by the end of this decade there will be one chronically ill, physically handicapped, or older worker for every able-bodied worker in America. Clearly, for economic, social, and moral reasons, handicapped workers must be integrated into the mainstream of employment activity in this country. The major responsibility, as well as the greatest rewards, for accomplishing this task rest with employers.

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